CLAIMS

1) Drive unit for boats, comprising a transmission with two coaxial bevel gears (6, 7), mounted opposite one another on the same engine shaft (2), which engage a bevel gear (8) fitted to a shaft (3) orthogonal to the preceding shaft (2), and means designed to mesh said engine shaft with one or other of said bevel gears (6, 7), characterised in that said means designed to mesh said bevel gears with said engine shaft are constituted by clutches (11), each housed in a closed seating inside the body of said bevel gears (6, 7).

2) Drive unit according to claim 1, characterised in that the engine shaft (2) and said bevel gears (6, 7) is fitted on bearings which in turn are mounted on the housing of the drive unit so as to discharge the reaction forces onto the structure of the housing, and not onto the other rotating parts.

3) Drive unit according to claim 2, characterised in that said engine shaft (2) is mounted on a pair (or more) of bearings (4) which are mounted on the housing (5) of the device, and said opposite bevel gears (6, 7) are each fitted on one side to a bearing (9) mounted on the housing (5) and on the opposite side to at least one bearing (10), which in turn is mounted on a central support (18) integral with said casing (5).

4) Drive unit according to claim 3, characterised in that said clutches (11) are multi-disk clutches, with forced and controlled lubrication and cooling.

5) Drive unit for boats as claimed in claim 4, characterised in that a number of pipes (15, 16) are formed in said engine shaft (2) to convey a pressurised fluid to said clutches (11).

6) Drive unit according to claim 5, characterised in that said pipes (15, 16)

are located on the same axis as said engine shaft (2).

7) Drive unit as claimed in claim 4, characterised in that for the purpose of lubricating said clutches (11), it includes a circuit comprising:

- a first annular chamber (19) bounded by said central support (18) of housing (5), said engine shaft (2) and said bevel gears (6, 7);
- a second annular chamber (22) inside each of said bevel gears (6, 7) which communicates with said first annular chamber (19) by means of a series of channels (21) formed in the surface of said engine shaft (2);
- said first annular chamber (19) communicating with a pipe (20) designed to convey a cooling fluid, and said second annular chamber (22) communicating, through one or more pipes (23), with said clutches (11).

8) Drive unit as claimed in claim 7, characterised in that said pipes (23) are formed in the support (12) of said clutches (11).

9) Drive unit for boats according to claim 1, characterised in that it includes:

- an engine shaft (2) mounted on bearings (4) which in turn are fitted on the housing (5) of the device;
- a pair of opposite coaxial bevel gears (6, 7) each fitted on bearings (9, 10) which in turn are fitted on said housing (5), which said bevel gears (6, 7) can rotate freely around said engine shaft (2), and which said bevel gears (6, 7) engage with a bevel gear (8) fitted to shaft (3) which transmits motion to the propeller;
- a clutch unit (11) installed in a closed seating formed in each of said bevel gears (6, 7), which said unit is designed to connect said engine

shaft (2) with said bevel gears (6, 7), each clutch unit comprising a support (12) with a set of disks connected with said engine shaft (2), a second set of disks connected with the body of said bevel gears (6, 7) and engagement systems of said clutches designed to compress said sets of disks;

- at least two pipes (15, 16) formed in said engine shaft (2), connected on one side to means designed to convey a pressurised fluid, and on the other to said clutch engagement systems.

10) Drive unit as claimed in claim 9, characterised in that it includes a circuit for the lubrication and cooling of said clutches (11), comprising:

- a first annular chamber (19) bounded by said central support (18) of housing (5), said engine shaft (2) and said bevel gears (6, 7);
- a second annular chamber (22) inside each of said bevel gears (6, 7) which communicates with said first annular chamber (19) by means of a series of channels (21) formed in the surface of said engine shaft (2);
- said first annular chamber (19) communicating with a pipe (20) designed to convey a cooling and lubricating fluid, and said second annular chamber (22) communicating, through one or more pipes (23), with said clutches (11).